Repair Instructions and Parts List 309425

Parts

Rev. E

ASM®

Zip-Clean™

INSTRUCTIONS

This manual contains important warnings and information.
READ AND KEEP FOR REFERENCE.

2730B

Model 245347, Series A with Briggs & Stratton 6.5 HP Motor

2700 psi (186 bar, 18.6 MPa) Operating Pressure
3000 psi (210 bar, 21.0 MPa) Maximum Working Pressure

2730H

Model 245348, Series A with Honda 6.5 HP Motor

2700 psi (186 bar, 18.6 MPa) Operating Pressure
3000 psi (210 bar, 21.0 MPa) Maximum Working Pressure

3030

Model 245349, Series A

3000 psi (210 bar, 21.0 MPa) Operating Pressure
3300 psi (227.5 bar, 22.75 MPa) Maximum Working Pressure

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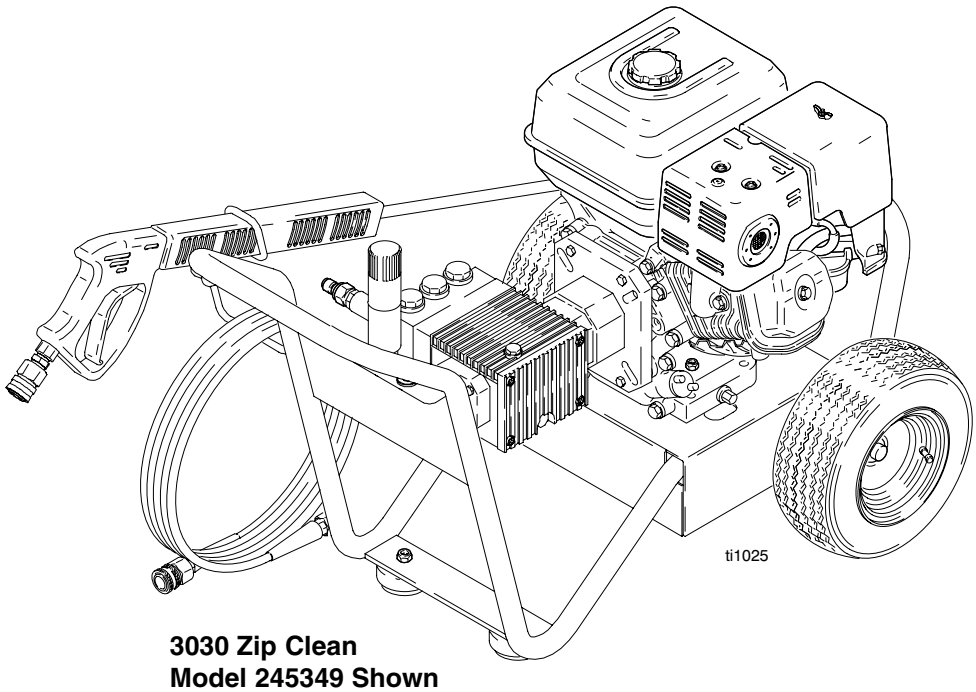
Related manuals

. . . . . **309424**

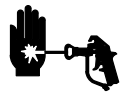


3030 Zip Clean
Model 245349 Shown

⚠ WARNING

FUEL HAZARD

The fuel used in this equipment is flammable. When spilled on a hot surface it can ignite and cause a fire. Do not fill fuel tank while engine is running or hot.



INJECTION HAZARD

Spray from gun, leaks or ruptured components can inject fluid into your body and cause an extremely serious injury, including the need for amputation. Splashing fluid in the eyes or on the skin can also cause serious injury.

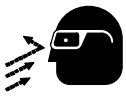
- Fluid injected into the skin might look like just a cut, but it is a serious injury. **Get immediate surgical attention.**
- Do not point gun at anyone or any part of the body.
- Do not put hand or fingers over the spray tip, and do not stop or deflect fluid leaks with your hand, body, glove or rag.
- Do not “blow back” fluid; this is not an air spray system.
- Always have tip guard and trigger guard on gun when spraying.
- Engage trigger safety whenever you stop spraying.
- Follow the **Pressure Relief Procedure** on page 4 when you are instructed to relieve pressure; stop spraying; check, clean, or service any system equipment; or install or change spray tips.
- Tighten all fluid connections before each use.
- Check the hoses, tubes and couplings daily. Replace worn or damaged parts immediately. Permanently coupled hoses cannot be repaired.
- Handle and route hoses and tubes carefully. Keep hoses and tubes away from moving parts and hot surfaces. Do not use the hoses to pull equipment. Do not expose ASM hoses to temperatures above 150°F (65°C) or below –40°F (–40°C).

TOXIC FLUID HAZARD

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, or swallowed.

To help prevent injury or death from toxic fluids

- Know specific hazards of fluid you are using; store hazardous fluid in approved tub; dispose of hazardous fluid according to all local, state, and national guidelines.
- Always wear protective eyewear, gloves, clothing, and respirator as recommended by fluid and solvent manufacturer.



FLUID SPLASHBACK HAZARD

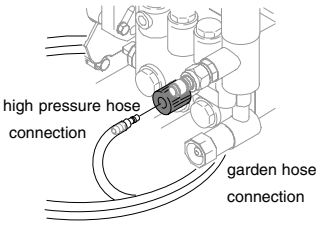
To avoid splashback of fluid while spraying, make sure the spray gun is assembled with the correct gasket for the fluid being sprayed.

EXHAUST HAZARD

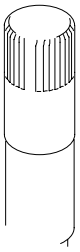
The exhaust contains poisonous carbon monoxide which is colorless and odorless. Do not operate this equipment in a closed building.

Component Identification

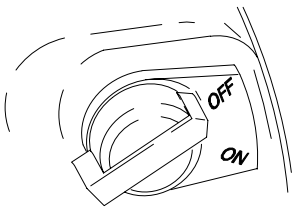
High Pressure Hose Connection and Garden Hose Connection



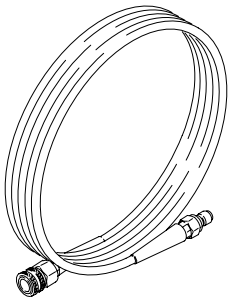
Pressure Unloader Adjustment Knob

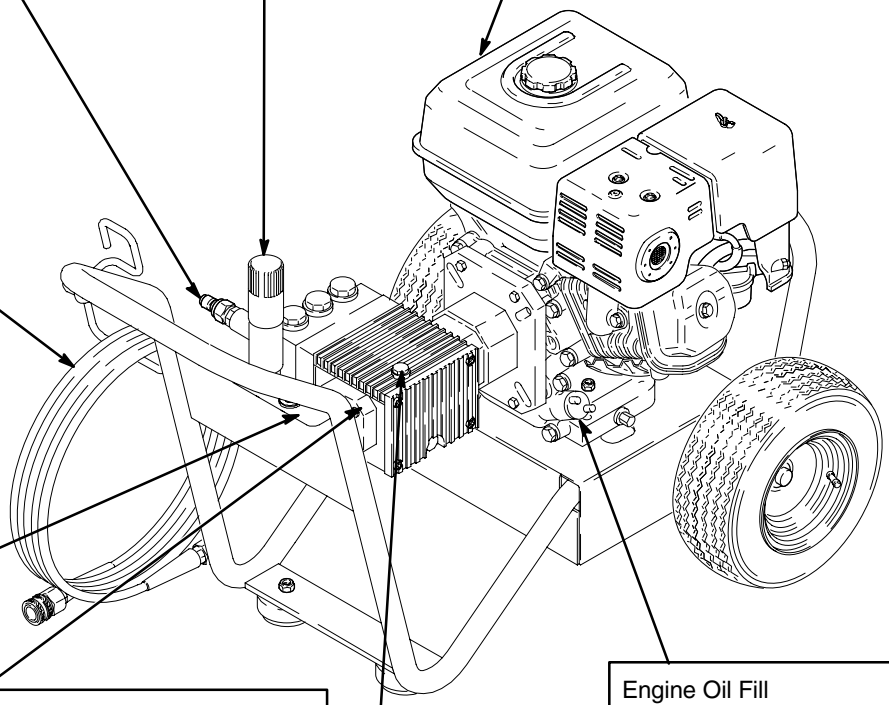


On/Off Engine Switch (side)

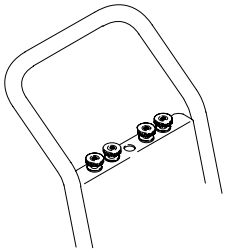


Hose

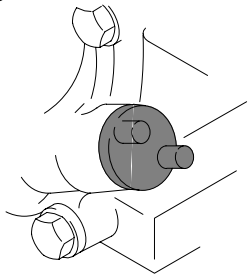




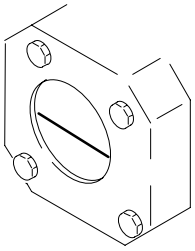
Tip Storage



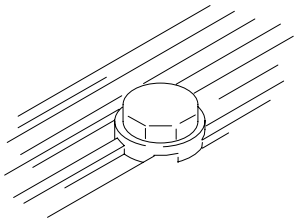
Engine Oil Fill

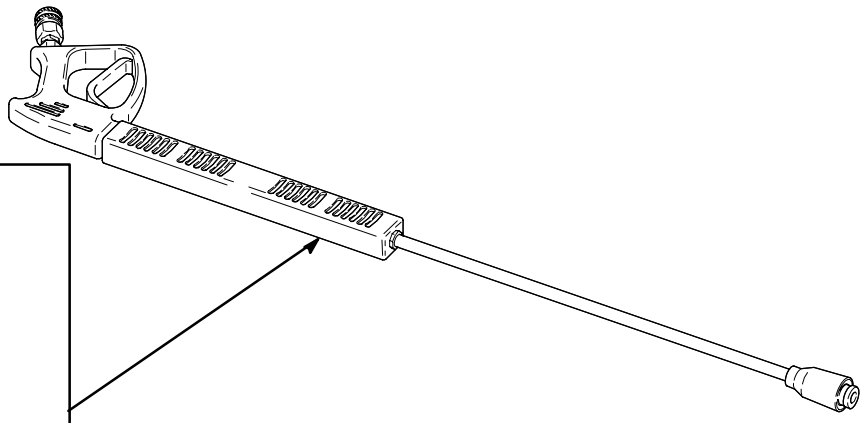


Oil Level Site Gage

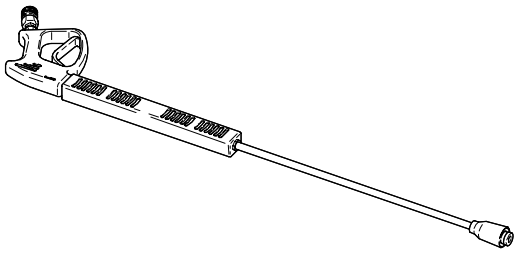


Hydraulic Fluid Fill





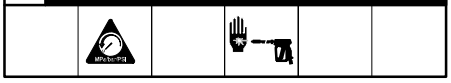
Gun and wand



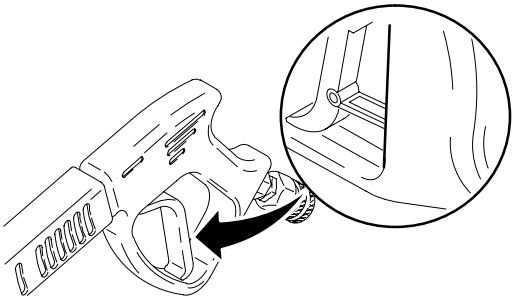
Pressure Relief

Follow these instructions whenever you are instructed to relieve pressure, stop spraying for more than 10 minutes, check or service the equipment, or install or clean the spray nozzle.

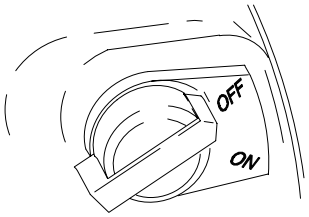
WARNING



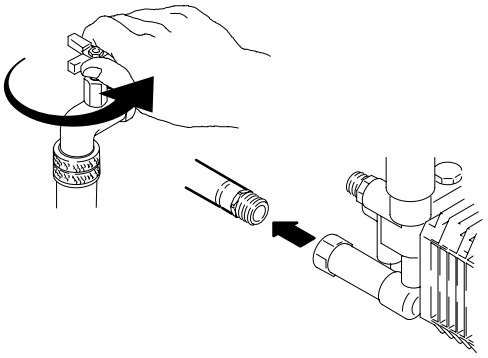
1. Engage trigger safety latch.



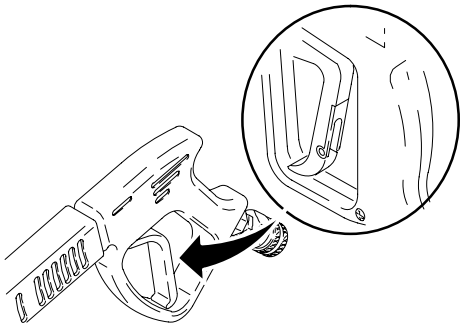
2. Turn Zip Clean off and remove ignition cable from spark plug.



3. Shut off water supply. Disconnect from water.



4. Remove trigger safety latch and trigger gun to relieve pressure. Then engage the safety latch.



Note: If you suspect the spray tip or hose is clogged or that pressure has not been fully relieved after following this procedure, disengage trigger safety latch and trigger gun again.

Maintenance Chart

Relieve pressure, page 4.

Interval	What to do
Daily	Clean water inlet screen and filter. Check engine and pump oil levels. Fill as necessary. Check gasoline level. Fill as necessary.
After first 5 hours of operation	Change engine break-in oil. Drain oil when warm. Use SAE 30 or 10W–30 detergent oil.
After every 25 hours of operation	Clean and remove air cleaner foam. Wash with water and detergent. Dry thoroughly. Rub with oil, and squeeze to distribute oil.
After first 50 hours of operation	Change pump break-in oil. Use approved SAE 20/30 pump oil.
After every 100 hours of operation, or every 3 months	Clean or replace paper air cleaner cartridge. Tap gently to remove dirt. Change engine oil. Use SAE 30 or 10W–30 detergent oil.
After every 500 hours of operation, or every 6 months	Change pump oil. Use approved SAE 20/30 pump oil.

Troubleshooting

Relieve pressure, page 4.

Problem	Cause	Solution
Engine will not start or is hard to start.	No gasoline in fuel tank or carburetor	Fill tank with gasoline, open fuel shutoff valve. Check fuel line and carburetor.
	Low oil	Add oil to proper level.
	Start/Stop switch in STOP position	Move switch to START position
	Water in fuel or old fuel	Drain fuel tank and carburetor. Use new fuel and make sure spark plug is dry.
	Engine flooded or improperly choked	Open choke, pull engine starter rope several times to clear out fuel. Make sure spark plug is dry.
	Dirty air cleaner filter	Remove and clean.
	Spark plug dirty, wrong gap, or wrong type	Clean, adjust gap or replace.
	Gun not triggered	Trigger gun while starting engine.
	6.5 hp Briggs & Stratton model may experience “vapor lock” due to gas type and temperature	Allow unit to cool approximately 15 minutes and restart.
Engine misses or lacks power	Partially plugged air cleaner filter	Remove and clean.
	Valve adjustment (lash) worn	Adjust valve lash to manufacturer’s specification.
	Spark plug dirty, wrong gap, or wrong type	Clean, adjust gap or replace.
Pressure is too low and/or pump runs roughly	Worn or wrong size tip	Replace with tip of proper size.
	Inlet filter clogged	Clean. Check more frequently.
	Worn packings, abrasives in water, or natural wear	Check filter. Replace packing.
	Inadequate water supply	Check water flow rate to pump.
	Fouled or dirty inlet or discharge valves	Clean inlet and discharge valve assemblies. Check filter.
	Restricted inlet	Garden hose might be collapsed or kinked.
	Worn inlet or discharge valves	Replace worn valves.
	Leaking high–pressure hose	Replace high–pressure hose.
Water leaks from under pump minifold	Worn packings	Install new packings.
Water on oil side of pump	Humid air condensing inside crankcase	Change oil as specified in Maintenance Chart (page 5).
	Worn packings	Install new packings.
	Oil seals leaking	Install new oil seals.

Problem	Cause	Solution
Packings are failing frequently or prematurely	Scored, damaged, or worn plungers	Install new plungers.
	Abrasive material in fluid being pumped	Install proper filtration on pump inlet plumbing.
	Inlet water temperature too high	Check water temperature. It should not exceed 160°F (70°C).
	Overpressurizing pump	Do not modify any factory–set adjustments.
	Excessive pressure due to partially plugged or damaged tip	Clean or replace tip. See Installing and Changing Spray Tips, Operating Instruction manual 309324.
	Pump running too long without spraying	Never run pump more than 10 minutes without spraying.
	Running pump dry	Do not run pump without water.
Strong surging at inlet and low pressure on discharge side	Foreign particles in inlet or discharge valve or worn inlet and/or discharge valves	Clean or replace valves.

Pump Service: 2730

Repair kits are available. See the **Parts Lists** (page 12). For the best results, use all parts in the kits.

Relieve pressure, page 4.

NOTES:

- Metric wrenches needed: 5 mm, 13 mm, 22 mm.
- Tool Kit 800271 contains tools for removing packing retainers.
- Drain and refill pump after 50 hours of operation.

Valves

Order Valve Assembly Kit 804402.

1. Remove hex plug from manifold using a 22 mm socket.
2. Examine o-ring seated under hex plug. Replace it if cut or distorted.
3. Remove valve assembly from cavity; the assembly might come apart.
4. Install new valve, o-ring and hex plug. Torque to 33 ft-lb (45 N•m).

NOTE: Retorque plug after 5 hours of operation.

Pumping Section

1. Remove 8 capscrews and lockwashers from manifold using a 5 mm wrench.
2. Carefully separate manifold from crankcase.

NOTE: If stuck, tap manifold lightly with a soft mallet to loosen it.

⚠ CAUTION

To avoid damaging plunger or seals, keep manifold properly aligned with ceramic plungers when you remove it.

3. Carefully examine each plunger for any scoring or cracking, and replace as necessary.

Servicing Plungers

1. Turn plunger retaining nut 5 or 6 turns using a 13 mm wrench to loosen. Push plunger toward crankcase to separate plunger and retaining screw.
2. Remove nut from plunger. Examine and clean o-ring, backup ring, and copper bearing/gasket washer.
3. Remove plunger and flinger from plunger shaft. Clean parts as necessary.
4. Inspect plunger shaft for oil leakage from crankcase. If leaking is obvious, replace oil seals. Otherwise, DO NOT remove these seals, they cannot be reused. Order Oil Seal Kit 804033 for replacing seals.
5. Lightly grease flinger (and oil seal if it is being replaced), and install on plunger shaft. Then install plunger.
6. Lightly grease retaining screw and outer end of plunger. Place washer, o-ring, and backup ring around screw, and install nut through plunger. Torque to 11 ft-lb (15 N•m).

NOTE: If replacing packings, see Servicing the V-packings page 9.

7. Lubricate outside of each plunger. Slide manifold onto crankcase, being careful not to damage seals.
8. Install capscrews and washers finger tight. Torque the screws to 8.8 ft-lb (12 N•m) following tightening pattern (Fig. 1). Uneven tightening could cause manifold to bind or jam.

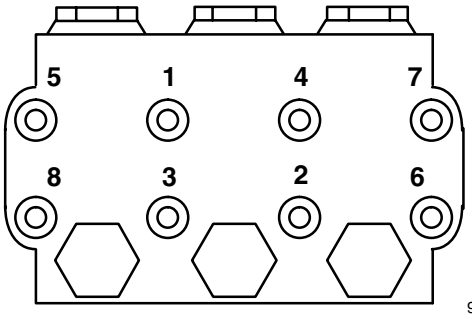


Fig. 1

Servicing V-Packings

1. Remove manifold as outlined in Pumping Section on page 8.

2. Carefully pull packing retainer from manifold. Examine o-ring, and replace if cut or damaged.

3. Remove v-packing and head ring. Pull out intermediate retainer ring. Remove second v-packing and second head ring.

4. Inspect all parts and replace as necessary.

5. Thoroughly clean packing cavities and examine for debris or damage.

6. Lightly grease packing cavities and replace the packings in the following order: head ring, v-packing, intermediate ring, head ring, v-packing, packing retainer. Install o-ring in retainer groove.

⚠ CAUTION

Install parts in proper order and facing proper direction. Improperly installed parts will cause a malfunction.

7. Reassemble manifold as instructed in Servicing Plungers on page 8.

Pump Service: 3030

Repair kits are available. See the **Parts Lists** (page 16). For the best results, use all parts in the kits.

Relieve pressure, page 4.

NOTES:

- Metric wrenches needed: 6 mm, 13 mm, 27 mm.
- Tool Kit 800271 contains tools for removing packing retainers .
- Drain and refill pump after 50 hours of operation.

Valves

Order Valve Assembly Kit 804402.

1. Remove hex plug from manifold using a 27 mm socket.
2. Examine o-ring seated under hex plug. Replace if cut or distorted.
3. Remove valve assembly from cavity; the assembly might come apart.
4. Install new valve, o-ring and hex plug. Torque to 73 ft-lb (99 N•m).

NOTE: Retorque plug after 5 hours of operation.

Pumping Section

1. Remove 8 capscrews and lockwashers from manifold using a 6 mm wrench.
2. Carefully separate manifold from crankcase.

NOTE: If stuck, tap manifold lightly with a soft mallet to loosen it.

⚠ CAUTION

To avoid damaging plunger or seals, keep manifold properly aligned with ceramic plungers when you remove it.

3. Carefully examine each plunger for any scoring or cracking, and replace as necessary.

Servicing Plungers

Order Plunger Repair Kit 243430. It includes replacement retainers, o-rings, washers, and backup rings for three cylinders.

1. Turn plunger retaining nut 5 or 6 turns using a 13 mm wrench to loosen. Push plunger toward crankcase to separate plunger and retaining screw.
2. Remove nut from plunger and examine o-ring, backup ring, and copper bearing/gasket washer. Replace these parts if necessary.
3. Remove plunger and flinger from plunger shaft. Clean and replace parts as necessary.
4. Inspect plunger shaft for oil leakage from crankcase. If leaking is obvious, replace oil seals. Otherwise, DO NOT remove these seals, because they cannot be reused. Order Oil Seal Kits 804033 for replacing the seals.
5. Lightly grease the flinger (and oil seal if it is being replaced), and replace on plunger shaft. Then install plunger.
6. Lightly grease retaining screw and outer end of plunger. Place washer, o-ring, and backup ring around screw, and install nut through plunger. Torque to 14.4 ft-lb (19.5 N•m).

NOTE: If replacing packings, see Servicing V-packings**,** page **11**.

7. Lubricate outside of each plunger. Slide the manifold onto the crankcase, being careful not to damage seals.
8. Install capscrews and washers finger tight. Torque screws to 22 ft-lb (30 N•m) following tightening pattern (Fig. 2). Uneven tightening could cause manifold to bind or jam.

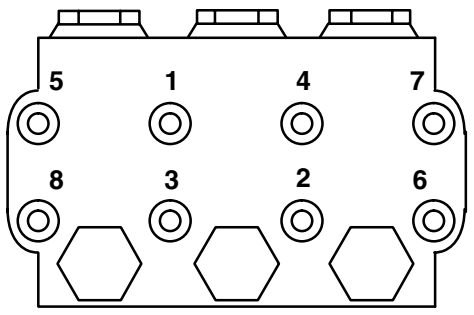


Fig. 2

Servicing V-Packings

NOTE: There are two types of packing kits: One is packings only. The other includes packings, o–rings and retainers.

1. Remove the manifold as outlined in Pumping Section on page 10.

2. Carefully pull packing retainer from manifold. Examine o-ring and replace if cut or damaged.

3. Remove v-packing and head ring. Pull out intermediate retainer ring. Remove second v-packing and second head ring.

4. Inspect all parts. Replace as necessary.

5. Thoroughly clean packing cavities. Examine for debris or damage.

6. Lightly grease packing cavities. Replace packings in the following order: head ring, v-packing, intermediate ring, head ring, v-packing, packing retainer. Install o-ring in retainer groove.

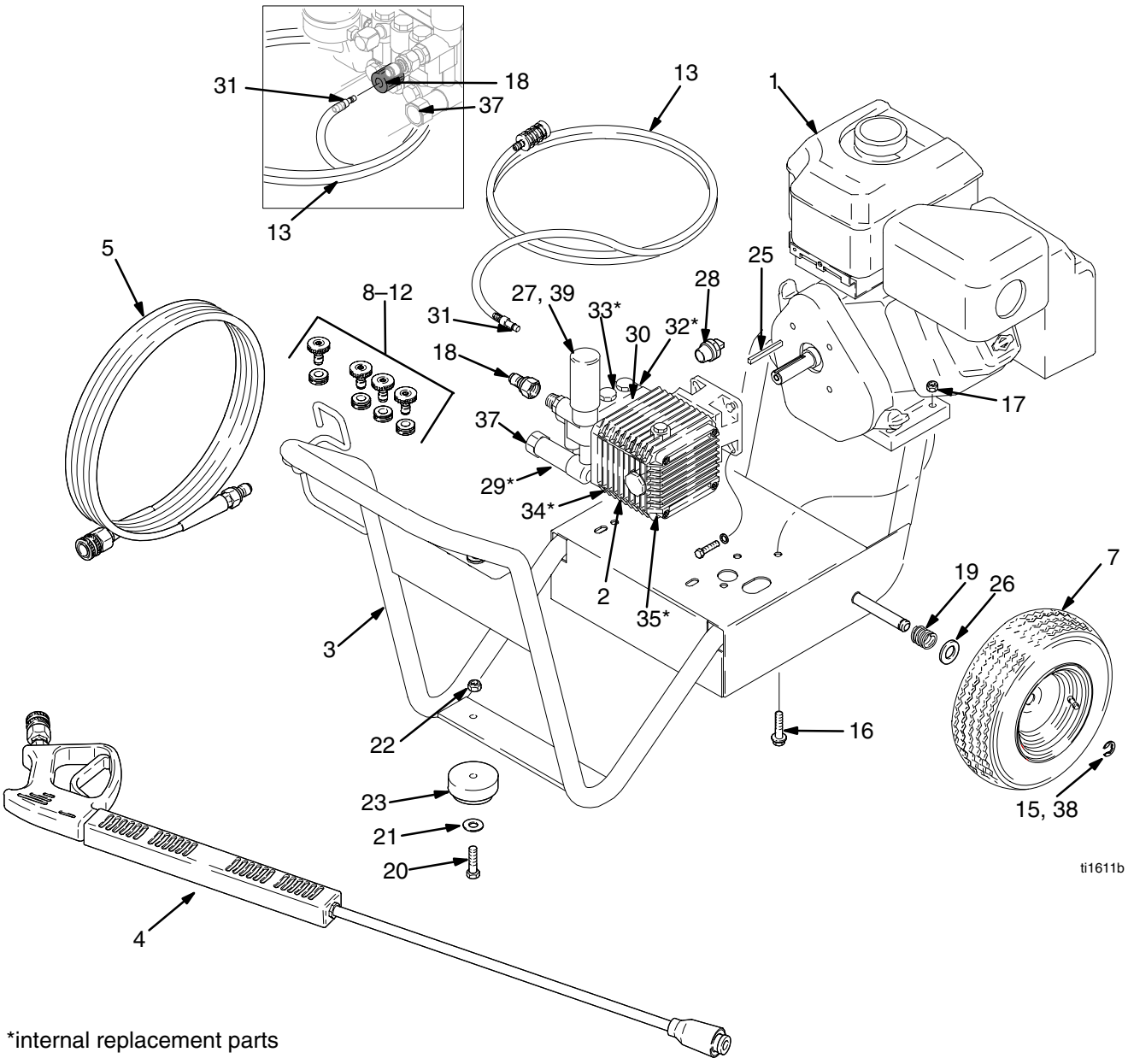
⚠ CAUTION

Install parts in proper order and facing proper direction. Improperly installed parts will cause a malfunction.

7. Reassemble manifold as instructed in Servicing Plungers on page 10.

Parts: 2730B

Model Nos. 245347, Series A, with Briggs & Stratton 6.5 HP Motor



*internal replacement parts

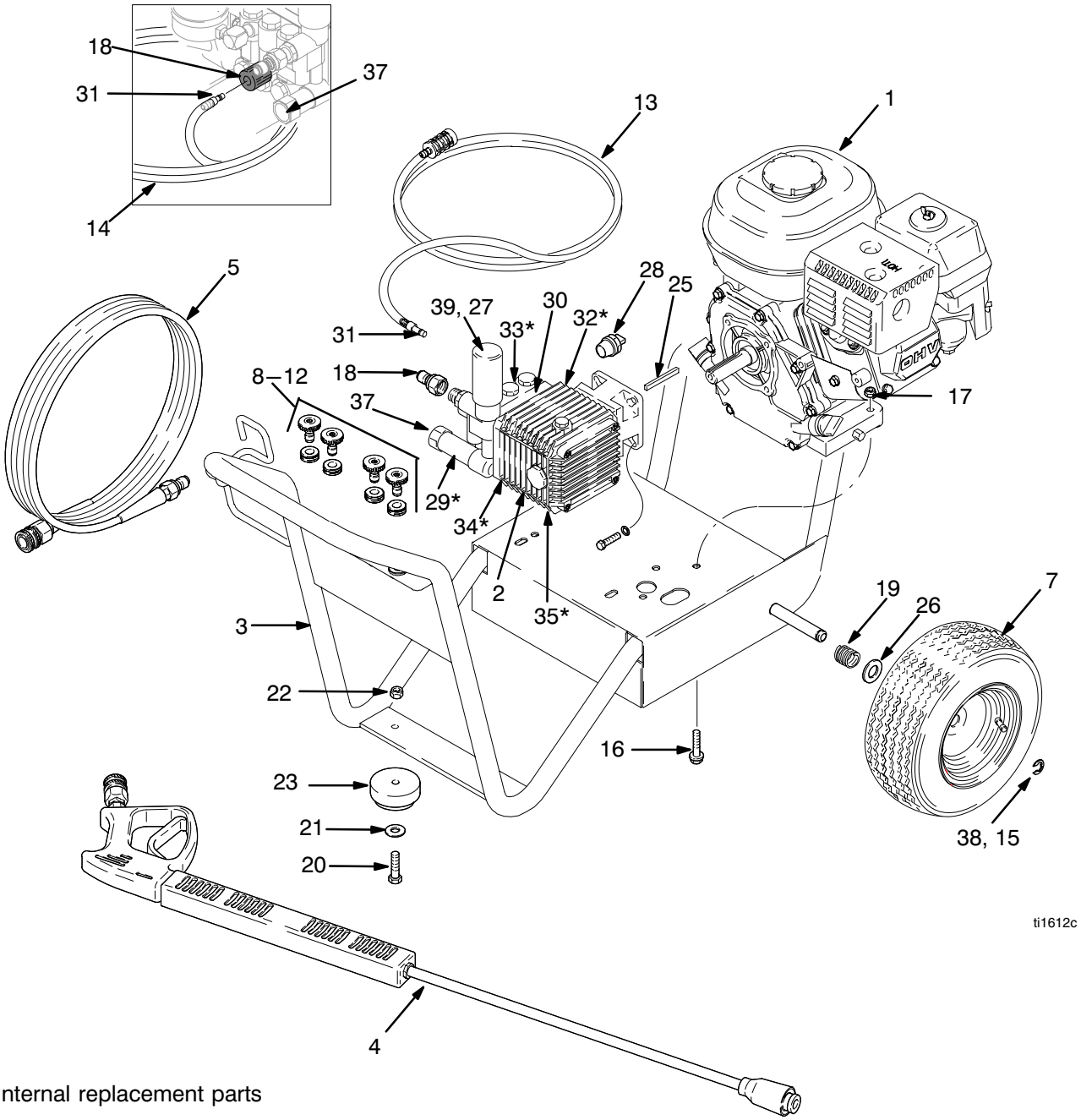
Parts: 2730B

Model Nos. 245347, Series A with Briggs & Stratton 6.5 HP Motor

Ref. No.	Part No.	Description	Qty.
1	116299	ENGINE, gasoline 6.5 HP Briggs & Stratton	1
2	244749	PUMP, water 2700, complete	1
3	245422	KIT, frame, includes wheels, feet and tip grommets	1
4	244582	GUN assembly	1
5	245587	HOSE	1
7	116968	WHEEL, pneumatic	2
8	805535	TIP, spray	1
9	805536	TIP, spray	1
11	805538	TIP, spray	1
	244768	KIT, tip 4–pack	1
12	805634	TIP, spray, chemical	1
13	804275	TUBING, chemical, 1/4–in ID X 8 ft	1
15	101242	RING, retaining	2
16	110837	SCREW	4
17	111040	NUT	4
18	197428	COUPLING, quick release	1
19	116411	SPRING, compression	2
20	801546	SCREW, cap	2
21	100132	WASHER, flat	2
22	101566	NUT, lock	2
23	801504	FOOT, rubber	2
25	197792	KEY, square	1
26	116477	WASHER, nylon	2
27	244803	KIT, repair, unloader, preset, 2700	1
28	116460	VALVE, thermal	1
29	244741	KIT, repair, chemical injector	1
30	116557	MANIFOLD, pump, replacement	1
31	116558	COUPLING, chemical injector	1
32	804037	KIT, pump, packing (3 cylinders)	1
33	804402	KIT, pump, valve (3 cylinders)	1
34	804011	KIT, pump, plunger (set of 3)	1
35	804033	KIT, pump, oil seal	1
37	244746	FITTING, pump, inlet	1
38	116563	NUT, push on (not shown)	2
39	244821	CHEMICAL injector complete	1

Parts: 2730H

Model Nos. 245348 Series A, with Honda 6.5 HP Motor



*internal replacement parts

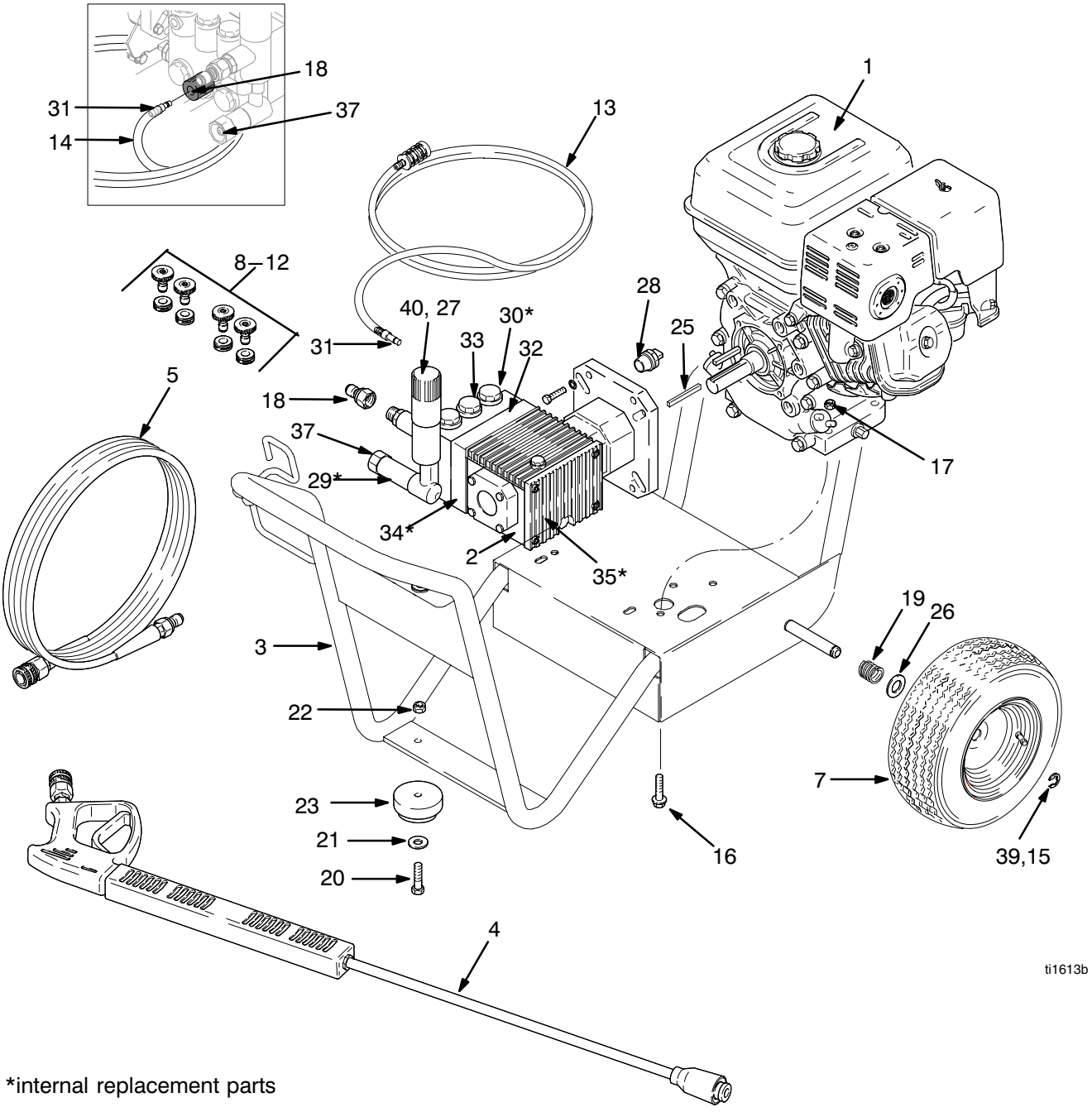
Parts: 2730H

Model Nos. 245348, Series A with Honda 6.5 HP Motor

Ref. No.	Part No.	Description	Qty.
1	116298	ENGINE, gasoline 6.5 HP Honda	1
2	244749	PUMP, water 2700, complete	1
3	245422	KIT, frame, includes wheels, feet and tip grommets	
4	244784	GUN assembly	1
5	245587	HOSE	1
7	116968	WHEEL, pneumatic	2
8	805535	TIP, spray	1
9	805536	TIP, spray	1
11	805538	TIP, spray	1
	244768	KIT, tip 4–pack	1
12	805634	TIP, spray, chemical	1
13	804275	TUBING, chemical, 1/4–in ID X 8 ft	1
15	101242	RING, retaining	2
16	110837	SCREW	4
17	111040	NUT, nylock	4
18	197428	COUPLING, quick release	1
19	116411	SPRING, compression	2
20	801546	SCREW, cap	2
21	100132	WASHER, flat	2
22	101566	NUT, lock	2
23	801504	FOOT, rubber	2
24	116460	VALVE, thermal 3/8 NPT	1
25	197792	KEY, square	1
26	116477	WASHER, nylon	2
27	244803	KIT, unloader, preset, 2700	1
28	116460	VALVE, thermal	1
29	244741	KIT, repair, chemical injector	1
30	116557	MANIFOLD, pump, replacement	1
31	116558	COUPLING, chemical injector	1
32	804037	KIT, pump, packing (3 cylinders)	1
33	804402	KIT, pump, valve (3 cylinders)	1
34	804011	KIT, pump, plunger (set of 3)	1
35	804033	KIT, pump, oil seal	1
37	244746	FITTING, pump, inlet	1
38	116563	NUT, push on (not shown)	2
39	244821	CHEMICAL injector complete	1

Parts: 3030

Model Nos. 245349, Series A with Honda 9 HP Motor



*internal replacement parts

Parts: 3030

Model Nos. 245349, Series A with Honda 9 HP Motor

Ref. No.	Part No.	Description	Qty.
1	803900	ENGINE, GX270	1
2	244750	PUMP, water 3000	1
3	245422	KIT, frame, includes wheels, feet, and tip grommets	
4	244784	GUN assembly	1
5	245587	HOSE, 3000	1
7	116968	WHEEL, pneumatic	2
8	805539	TIP, spray	1
9	805540	TIP, spray	1
11	805542	TIP, spray	1
	244769	KIT, tip 4–pack	1
12	805634	TIP, spray, chemical	1
13	804275	TUBING, chemical, 1/4–in ID X 8 ft	1
15	101242	RING, retaining	2
16	110837	SCREW	4
17	111040	NUT	4
18	197428	COUPLING, quick release	1
19	116411	SPRING, compression	2
20	801546	SCREW, cap	2
21	100132	WASHER, flat	2
22	101566	NUT, lock	2
23	801504	FOOT, rubber	2
25	801137	KEY, square	1
26	116477	WASHER, nylon	2
27	244804	KIT, repair, unloader, preset 3000	1
28	116461	VALVE, thermal	1
29	244741	KIT, repair, chemical injector (internal parts only)	1
30	116559	MANIFOLD, pump, replacement	1
31	116558	COUPLING, chemical injector	1
32	804404	KIT, pump, packing (3 cylinders)	1
33	804402	KIT, pump, valve (3 cylinders)	1
34	804415	KIT, pump, plunger (set of 3)	1
35	804033	KIT, pump, oil seal	1
37	244746	FITTING, pump, inlet	1
39	116563	NUT, push on (not shown)	2
40	244821	CHEMICAL, injector complete	1

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